

Before the

Federal Communications Commission

Washington, D.C. 20554

In the Matter of)

Digital Audio Broadcasting Systems)

And Their Impact on the Terrestrial Radio)MM Docket No. 99-325

Broadcast Service)

)

Reply Comments of Fanfare Electronics, Ltd.

Regarding Comments made by Mr. John Pavlica on May 21, 2002

In item number 7, following the paragraph which begins "I am opposed to the use of iBiquity IBOC-AM system",

Mr. Pavlica makes a very important statement dealing with "legacy or "heritage" radio service for the American public."

We share his concern that, with the highly functional, analog AM radio service that is already in place, and with its use having become so entrenched in world culture, any attempt to change it in favor of an unproven modulation system would be both impractical and inappropriate.

We also agree with Mr. Pavlica when he expresses concern over the abandonment of the public in depriving them of their right to enjoy "legacy" AM radio broadcasts without the threat of possible intrusion from first adjacent digital interference which may be generated by an adjacent IBOC station signal. Not only that, listeners who were originally within range of a given analog AM signal and might have listened even with a slight amount of noise, may never hear that station again. Therefore, the extent to which IBOC-AM serves the public would be as follows;

"If you're within a station's primary coverage area, you will receive the signal. If you are anywhere outside, you may not hear anything, except at night when IBOC would not be allowed to operate."

A Brief History

Nearly 20 years ago it was determined by those who envisioned perfection in radio reception that it would have to be in the form of a digital signal.

Why? Because digital is considered to be noise free. No one has ever considered that analog could be made to possess those very traits - Yet, they are available, and in a receiver design that is already a reality!

While we too propose that the public be allowed the right to unfettered, continued enjoyment of the analog AM system, we submit that it can be significantly enhanced through implementation of a newly-invented, extensively-tested, analog AM reception system developed by Omega Reception Technologies.

We further submit that such an implementation would offer a practical path to ensuring continuity of the legacy AM service, not to mention the plethora of happy listeners it would create.

When the Omega AM receiver was being planned, the mission statement was to address the list of improvements the listening public would like to see made in the quality of our present AM radio reception system; The most notable of these recommendations were and still are that AM broadcasting;

- Be made less noisy

- Have better fidelity
- Offer clearer, more reliable stereo
- Go further without fading, especially in underpasses, etc.
- Have digital data capabilities for RDS or EAS

Therefore, it is not by coincidence that the new Omega AM reception system embodies the following characteristics;

 Virtually noise-free reception

 FM quality sound

 AMAX-based stereo separation

 A reception range of up to double that of a traditional AM receiver

 The ability to maintain listenable signals in most "dead-to-AM" zones (underpasses, etc.)

 The capability of eventually adding non-intrusive datastreams (similar to IBOC-AM)

All this will be contained within a receiver which can be built at a cost competitive with high quality, mass market, multi-band radios that are already on the market.

Omega Reception Technologies has for the past year been testing and perfecting its revolutionary, new receiver in the hilly, Santa Rosa region of CA. Using the analog signal from AM stereo radio station KABL at Berkeley, CA (about 50 air-miles south, with two, 2000' hills intervening) the results have been nothing short of amazing. Preliminary test results using the Omega receiver have shown consistent, virtually noise-free, full fidelity stereo reception by day. At night the signal was still quiet and still in acceptable stereo. We should also add that, the Omega test receiver compiled its amazing results while unshielded and situated inside a reinforced concrete building with a metal roof, replete with noisy,

high speed computers and fluorescent lights. The only outside antenna was a 12 foot aluminum downpipe.

A summary of the results of these tests indicate that the typical reception range for the Omega receiver, using a good quality standard AM receiver as a comparison, is up to twice that of the standard AM receiver. At that extreme range, the noise level on the Omega receiver was negligible. The audio fidelity, in stereo, approached at least that of the radio station's air chain potential and we feel it could not be distinguished from the clarity offered by similar material being received in an FM broadcast.

The development of the Omega AM reception system offers the clearest, most compelling argument for continuing the analog AM broadcast system as the mandated broadcast system for the USA. It proves that the limits of analog reception are well beyond those previously thought possible and that even more developments in reception may lie ahead. Because Omega, or any other analog based technology, can receive all of today's AM transmissions, the proliferation of enhanced analog receivers will allow the least amount of disruption for broadcasters, all the while offering the greatest incentive for them to improve their AM signal even more. More importantly, it would provide a high quality AM radio service that not only provides excellent fidelity in mono and stereo, its extended reception range will make more signals available to listeners everywhere and provide reach into areas where listening to radio has, up to now, only been a dream.

The Omega AM receiver and several of its subsystems appear to be patentable and preliminary filings have been made. Very shortly it

will be showcased in a domestic demonstration monitor. For that purpose, Omega has partnered with Fanfare Electronics, Ltd. of Buffalo, NY who are recognized RF specialists, designing and building AM/FM monitors for both broadcast applications and domestic audiophile listeners.

While the Omega AM tuner's RF stages will be of analog design, it will be incorporated into a receiver that uses a highly functional, digital control system which can be adapted by any designer to suit any number of control requirements.

The Omega system will be available for license to receiver designers and manufacturers within a year.

Respectfully submitted by

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On behalf of Omega Reception Technologies of California